

CLSA Approved Project

Applicant

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Project Title

Genetic determinants of neurological diseases and their risk factors

Project Summary

Neurological disease has become an important cause of morbidity and mortality in Canada. In this study we will seek to understand the genetic and metabolomic determinants of specific neurological diseases, their risk factors, and their consequences. To do so, we will use a host of methods in the field of -omics epidemiology that seek to identify genes and metabolites that influence these outcomes, but also test the causal role of risk factors for neurological disease. Our objective is a data-driven objective. This is not a hypothesis-driven study, but rather, we will use the large genomic and metabolomics datasets available in the CLSA to allow these data to improve our understanding of neurological disease. Results from this study will help us to better understand the genetic determinants of neurological disease, its risk factors and its associated outcomes. This knowledge could help us to decrease the risk of one of the most common causes of morbidity and mortality in Canada.

Keywords

genome-wide association studies, GWAS, neurological diseases, Mendelian randomization, polygenic risk